

Notice of Allowability

Application No.

09/137,907

Examiner

Dieu-Minh Le

Applicant(s)

WANG, YI-MIN

Art Unit

2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the interview on 02/15/06 and the communication filed on 11/26/2001.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

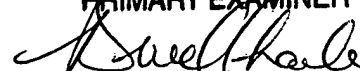
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DIEU-MINH LE
PRIMARY EXAMINER



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1. This office action is in response to the Interview on 02/15/2006 and the communication filed 11/26/2001.
2. Claims 1-16 are allowable over the prior art of record.
3. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.

EXAMINER'S AMENDMENT:

IN THE CLAIMS:

Please replace all prior versions of claims in the application with the current listing claims in the **ATTACHMENT:**

4. Authorization for this Examiner's Amendment was given in a telephone interview with Mr. Joseph c. Redmond Jr., Registration No. 18,753 on February 15, 2006.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (571) 272-3660. The examiner can normally be reached on Monday - Thursday from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644. The Tech Center 2100 phone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DIEU-MINH THAI LE
PRIMARY EXAMINER
ART UNIT 2114

DML.
03/02/2006

ATTACHMENT:

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PATENT
Attorney Docket No. 2455-4502US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: WANG :
Serial No.: 09/137,907 : Group Art Unit: 2184
Filed: August 21, 1998 : Examiner: M. Le
For: "METHOD AND SYSTEM FOR PROVIDING RELIABILITY AND
AVAILABILITY IN A DISTRIBUTED COMPONENT OBJECT MODEL.."

SUPPLEMENTAL AMENDMENT

Mail Stop ____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to a Telephone Interview conducted with the Examiner, M. Le, on
February 15, 2006, please amend the claims pending in the application as follows:

Amendments to the Claims are reflected in the listing of claims, which begins
on page 2 of this paper.

Remarks begin on page 8 of this paper.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for enhanced software fault tolerance in a Distributed Component Object Model comprising the steps of:
 - a client maintaining a pool of server object instances on multiple machines;
 - the client invoking a first server object instance from the pool with a client request until an error occurs in the first server object instance; and
 - determining whether the error is minor and continuing the first server object instance or if the error is significant the client invoking a second server object instance from the pool based to replace the first server object instance in processing the client request.
2. (Previously Presented) The method of claim 1 wherein the error by the first server object instance is identified by the first server object instance.
3. (Previously Presented) The method of claim 1 wherein the error by the first server object instance is identified by the client.
4. (Previously Presented) A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:
 - a first server object instance from the pool with a client request until an error occurs in the first server object instance; and

a determining program module which determines whether the error is minor and continuing the first server object instance or if the error is significant the client invokes a second server object instance from the pool to replace the first server object instance in processing the client request.

5. (Previously Presented) The system of claim 4 wherein the error by the first server object instance is identified by the first server object instance.

6. (Previously Presented) The system of claim 4 wherein the error by the first server object instance is identified by the client.

7. (Currently Amended) A method for enhanced software fault tolerance in a Distributed Component Object Model comprising the steps of:

determining a number (N) of different server object instances required to achieve a desired reliability or availability of a client;

maintaining a pool of at least N different server object instances on multiple machines;

and

invoking N different server object instances from the pool; and

determining whether the error is minor and continuing the first server object instance or if the error is significant the client invoking a second server object instance from the pool based to replace the first server object instance in processing the client request.

8. (Previously Presented) The method of claim 7 further comprising the steps of:
identifying an error produced by one of the N different server object instances; and
replacing the server object instance that produced the error with another server object instance from the pool.
9. (Previously Presented) The method of claim 7 wherein the error is identified by one of the N different server object instances.
10. (Previously Presented) The method of claim 7 wherein the error is identified by the client.
11. (Previously Presented) The method of claim 7 further comprising the steps of:
comparing processing results of the N different server object instances to detect errors in any one of the N different server object instances;
determining that an error was produced by one of the N different server object instances;
and
removing the server object instance that produced the error, if N is three or greater.
12. (Currently Amended) A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:
a client; and

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a pool of at least N different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the pool, and the client invokes the N different server object instances from the pool to provide software fault tolerance; ~~and~~

a comparing program module which compares processing results of the N different server objects to detect errors in any one of the N different server object instances; and

a determining program module for determining whether the error is minor and continuing the first server object instance or if the error is significant the client invoking a second server object instance from the pool based to replace the first server object instance in processing the client request.

13. (Currently Amended) The system of claim 12 wherein ~~the system comprises:~~

[a] the determining program module ~~which~~ determines that an error was produced by one of the N different server object instances whereby the server object instance that produced the error is removed from the system, if N is three or greater.

14. (Currently Amended) A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

a client;

a pool of at least N plus one different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the

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pool, the client invokes N different server object instances from the pool, one of the N server object instances produces an error and the client invokes another server object instance from the pool as a replacement for the server object instance that produced the error; ~~and~~

a detecting program module which detects whether one of the N server object instances produces an error whereby the client invokes another server object instance from the pool as a replacement for the server object instance that produced the error; and

a determining program module for determining whether the error is minor and continuing the first server object instance or if the error is significant the client invoking a second server object instance from the pool based to replace the first server object instance in processing the client request.

15. (Currently Amended) A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

a client;

a pool of at least N plus one different server object instances on multiple machines, wherein N different server object instances are required; ~~and~~

an error identifying program module which enables the client to identify an error produced by one of the N different server object instances whereby the client invokes another server object instance from the pool as a replacement for the server object instance that produced the error; and

a determining program module for determining whether the error is minor and continuing the first server object instance or if the error is significant the client invoking a second server object instance from the pool based to replace the first server object instance in processing the client request.

16. (Currently Amended) A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

a client;

a pool of at least N plus one different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the pool, the client invokes N different server object instances from the pool, and

an error identifying program module which enables one of the N different server object instances to identify an error produced by one of the N different server object instances whereby the client invokes another server object instance from the pool as a replacement or the server object instance that produced the error; and

a determining program module for determining whether the error is minor and continuing the first server object instance or if the error is significant the client invoking a second server object instance from the pool based to replace the first server object instance in processing the client request.

REMARKS

Claims 1-16 are pending in the application.

In response to a Telephone Interview conducted with Examiner M. Le on February 15, 2006, the claims have been amended to include the “determining” feature of Claim 1 in independent Claims 7, 12, 14-16 and overcome the cited art. The amendment of the claims places the application in condition for allowance.

Please enter the amendment into the record.

CONCLUSION

Entry of the amendment, allowance of Claims 1-16, and passage to issue of the application are requested.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4500, Order No. 2455-4502US1. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No 13-4500, Order No. 2455-4502US1. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

Dated: February 22, 2006

By: /Joseph C. Redmond, Jr./
Joseph C. Redmond, Jr.
Registration No. 18,753

Correspondence Address:

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